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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,500	02/24/2000	Yasumasa Kuroba	2803.63637	5652

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
2655	5

DATE MAILED: 03/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/512,500	Applicant(s) Kuroba et al.
Examiner Gautam R. Patel	Art Unit 2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Feb 19, 2003

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-7 is/are pending in the application.

4a) Of the above, claim(s) 3-7 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1 is/are rejected.

7) Claim(s) 2 is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on Feb 24, 2000 is/are a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

4) Interview Summary (PTO-413) Paper No(s). _____

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3

6) Other:

DETAILED ACTION

1. Claims 1-7 are pending for the examination. 3-7 are withdrawn from further consideration.

Election/Restriction

2. Claims 3-7 are withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to figs. 10-14; for method of writing a servo track. Election was made with traverse of claims 3-7.

Applicant's election with traverse of first embodiment in Paper No. 4 is acknowledged. The traversal is on the ground(s) that "a search for all species would not place an undue burden on the examiner. And , a search for the elected species would likely overlap with a search for the other species ...".

This is not found persuasive because, the Examiner does not need to show that how much time or effort is involved and separate classification or field of search for election of the species requirement. See 803.00 and 808.01(a); M.P.E.P.

The requirement is still deemed proper and is therefore made **FINAL**.

3. Applicants are urged to cancel non-elected claims. Applicant are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

NOTES & REMARKS

5. "The meaning of every term used in any of the claims/specification should be apparent from the descriptive portion of the specification with clear disclosure as to its import; ..." (see 37 CFR § 1.75, MPEP § 608.01(l)).

Specification page 1 line 37 has an acronym "STW" that has not been defined in the specification first time it appears. *f*

Also specification page 2 line 37 has an acronym "DE" that has not been defined in the specification first time it appears.

NOTE: These are well known acronym in this art, however the Applicants are urged to define them first time they appear in the specification.

An explanation and/or corrections are required.

Drawings

6. The drawings are objected for following reasons:

Figures 1-5b are not designated by a legend such as "Prior Art". The legend is necessary in order to clarify what applicant's invention is (see MPEP § 608.02g).

Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of two parts:

- a. A separate letter to the Draftsman in accordance with MPEP § 608.02 (r); and,
- b. A print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02 (v).

IMPORTANT NOTE: the print or pen-and-ink sketch with proposed corrections shown in *red ink* is required in response to this Office Action, and may not be deferred.

Correction is required.

Specification

7. The disclosure is objected for following reasons.

The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. The title should reflect the gist of or the improvement of the present invention.

Correction is required.

Claim Rejections - 35 U.S.C. § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this

application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is are rejected under 35 U.S.C. § 102(e) as being anticipated by Ohmi, US. patent 5,936,787 (hereafter Ohmi).

As to claim 1, Ohmi discloses the invention as claimed [see Figs. 3-6] including detecting vibration detecting phase determining write start and moving head comprising the steps of:

detecting the continuous vibration asynchronous with the rotational frequency of said spindle motor ;

detecting the phase of the detected asynchronous continuous vibration [col. 3, lines 19-58];

determining the write start sector or the write end sector or the write start time or the write end time of each servo track based on said detected phase of the asynchronous continuous vibration [col. 9, lines 3-25 and col. 9, line 66 to col. 10, line 27]; and

moving said head by said head moving mechanism on said recording surface where said head positioning information is to be written and writing said information based on said write start sector or said write end sector [col. 2, line 66 to col. 3, line 9 and col. 9, lines 3-25].

NOTE: Ohmi discloses that error signals from rotational and axial direction are combined to produce a single adjustment signal. In other words write start sector place and time are inherently defined and writing starts accordingly.

Allowable Subject Matter

9. Claim 2 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Claim 2 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of writing a servo track for disk file apparatus wherein "the step of determining the start sector or write end sector includes the substep of setting a servo track write position is behind the phase of the peak amplitude of the vibration in case where $fc < fr$ [as defined by equation $(1-fc/fr) \times 180$ degree]. And write start position ahead of the phase of the peak amplitude of vibration, when $fc > fr$.". It is noted that the closest prior art, Ohmi. (US 5,936,787) shows a similar apparatus which reads the vibrational phase and frequency and adjust the head and also picks the write spot. However Ohmi fails to disclose details of the write pulse and when to place write pulse ahead or behind on what criteria as claimed by the Applicants.

Other prior art cited

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Sasamoto et al. (US. patent 6,064,541) "servo pattern writing method ..".
- b. Hamaguchi et al. (US. patent 6,404,576) "Method and system for compensation of nonlinearity ...".
- c. Ehrlich et al. (US. patent 6,519,107) "hard disk drive having self-written servo burst patterns".
- d. Omi (US. patent 5,903,408) " Data recording/reproducing ..".
- e. Hasegawa et al. (US. patent 5,995,318) "Head positioning control system for disk drives each formed by assembling disks ...".

- f. Ueda et al. (US. patent 6,111,714) "Disk drive and write control method ..".
- g. Kagami et al. (US. patent 6,324,132) "Method and system for controlling ..".
- h. Hasegawa et al. (US. patent 6,128,153) "Head position control for disk drive .."

Contact information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.


Gautam R. Patel
Patent Examiner
Group Art Unit 2655



March 13, 2003